Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
Promoting Expanded Opportunities for Radio Experimentation and Market Trials under Part 5 of the Commission's Rules and Streamlining Other Related Rules	)	ET Docket No. 10-236
2006 Biennial Review of Telecommunications Regulations – Part 2 Administered by the Office Of Engineering and Technology (OET)	)	ET Docket No. 06-105

COMMENTS

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WIRELESS COMMUNICATIONS ASSOCIATION

The Wireless Communications Association International, Inc. ("WCAI"), the trade association of the wireless broadband industry, submits these comments on the Commission's Notice of Proposed Rulemaking ("NPRM") in this proceeding.[1]

I. EXECUTIVE SUMMARY

WCAI supports the Commission's effort to streamline and consolidate its experimental licensing rules. Experimentation is essential to continuing innovation in radio technology, which benefits everyone, including existing licensees. However, avoiding harmful interference to existing licensees and services is also essential. To better balance these competing concerns, WCAI requests that the Commission alter its program experimental radio license proposal as follows:

- The Commission should require that an applicant for a program experimental radio license provide notice of its proposed experiment to existing licensees that might be affected by the experiment;
- The Commission should require that an applicant for a program experimental radio license obtain the consent of existing licensees before the applicant begins its experiment;
- The Commission need not require that an applicant for a program experimental radio license obtain advance licensee consent when the experiment will be conducted indoors at relatively low power and elevation;

[1] Promoting Expanded Opportunities for Radio Experimentation, *Notice of Proposed Rulemaking*, FCC 10-197 (rel. Nov. 30, 2010).

- Existing licensees should not bear the burden of proving that a proposed program experimental radio license experiment would cause harmful interference; and
- The Commission should adopt special provisions to protect mobile bands commonly used on the campuses of higher education.

These alterations would significantly reduce the potential for harmful interference and the burden on existing licensees without significantly burdening applicants for program experimental radio licenses. Our proposed modifications thus strike the right balance between promoting experimentation and the Commission's first priority of protecting existing licensees from harmful interference.

II. DISCUSSION

A. The Commission should require that an applicant for a program experimental radio license provide notice of its proposed experiment to existing licensees that might be affected by the experiment.

WCAI supports the Commission's proposal that, if any licensee raises interference concerns, the experiment shall not commence until the parties resolve the complaint. Relying on the parties to resolve interference issues in this way would reduce the burden of Commission staff and speed up the experimental licensing process for program experimental radio license ("PERL") applicants. It should also result in greater cooperation between the parties, who would be more likely to collaborate to resolve potential harmful interference issues.

However, WCAI does not support the Commission's proposal to place the burden of monitoring the PERL process on existing licensees. The proposed website

posting process would require *all* existing licensees to assign personnel to the daily monitoring of the website even if there is only a tiny potential for a PERL filing on any given day. Over time, this would result in countless wasted hours by thousands of licensees. The result would be an inefficient and wasteful process – the opposite of a streamlined approach.

A more efficient approach would be to put the burden of notice on PERL applicants. Because a PERL applicant knows which frequency bands it intends to use and the geographic area in which it intends to operate, it would require very little additional effort for a PERL applicant to provide direct notice of its experiment to potentially affected licensees. With the Commission's new spectrum dashboard and upcoming revisions to the Universal Licensing System ("ULS"), it is now easier than ever to ascertain the potentially affected licensees in any given geographical area. It is also likely that a PERL applicant would need to contact only a few licensees for any given experiment. Rather than require thousands of licensees to spend thousands of hours monitoring the potential for PERL applications, the Commission should require that a PERL applicant provide notice of a proposed experiment to existing licensees that might be affected by the experiment.

If the Commission nevertheless feels that requiring PERL applicants to provide notice would be too burdensome, the Commission should automate the notification system as part of its upgrade of ULS.[2] PERL applicants could just as easily input their application information into ULS as into another web-based form. If the ULS database linked the frequency bands and geographic entries of the PERL applicant with other

[2] See NPRM at ¶ 35.

licensee information in ULS – which should be relatively straightforward for a sophisticated relational database – an automatic notification could be sent by the system to the appropriate licensees in a manner similar to the Tower Construction Notification System.

B. The Commission should require that an applicant for a program experimental radio license obtain the consent of existing licensees before the applicant begins its experiment.

WCAI supports the Commission's proposal that the parties reach an agreement regarding potential interference issues before a PERL experiment commences. WCAI also agrees with the Commission's expectation that parties work in good faith to resolve interference concerns. However, with the exception discussed below in Section C, this collaborative process should occur *before* a PERL application is granted, not after. Existing licensees have no incentive to block PERL experiments that present no potential for harmful interference. To the contrary, existing licensees have an incentive to *support* harmless PERL experiments because many radio experiments have the potential to enhance the operations of existing licensees. However, the proposed rules provide very little incentive for a PERL applicant to consider the potential for its experiment to cause harmful interference to existing licensees. As proposed, the rules would not require that a PERL applicant be aware of existing licensees and systems in the area in which the experiment would take place or even consider the potential for harmful interference at all.

Requiring consent before a PERL experiment begins is the best way to ensure a streamlined and predictable PERL application process while protecting existing licensees and their end users from harmful interference. An advance consent

requirement, coupled with the notice discussed above, would prevent harmful interference by ensuring that a PERL applicant considers the impact of its application on existing licensees and that all existing licensees in the proposed area of the experiment have a fair opportunity to resolve any potential interference concerns.

Because the Commission has already conditioned PERL experiments on the resolution of any complaints made by existing licensees, an advance consent requirement would actually improve the efficiency of the PERL application process. As proposed, the rules would encourage PERL applicants to "roll the dice" to see whether an existing licensee objects. If the PERL applicant rolls "snake eyes," i.e., an objection is lodged, the applicant might have to delay or even cancel its experiment *after* it has been fully designed and funded. Encouraging applicants to consider and resolve harmful interference issues *before* an application has been submitted would eliminate the incentive to gamble and may actually speed up the PERL application process by allowing the parties to collaborate earlier in the game. This would result in a more stable and predictable process and would reduce costs and mitigate risk for both parties. Accordingly, the Commission should require that an applicant for a program experimental radio license obtain the consent of existing licensees before the applicant's license is granted.

Relying on the consent of existing licensees would also obviate the need to establish a maximum measured power flux density (pfd) limit to ensure that PERL experiments do not extend beyond the boundaries of a PERL applicant's property.[3] The number of frequency bands and services potentially affected by the Commission's

[3] See NPRM at ¶ 22.

proposal would make the establishment of pfd limits by rule extraordinarily difficult. For a number of reasons, some services are more likely to suffer harmful interference from experimental radio use than others. This reality of physics means the Commission would either need to establish a relatively low overall pfd limit or establish separate pfd limits for various bands and services. Either approach would likely result in a suboptimal outcome. A restrictive pfd limit may unnecessarily limit the utility of PERL experiments in some cases, and separate pfd limits would be difficult to develop and complicated to apply. If the Commission instead relies on a consent-based approach, PERL applicants and licensees could tailor pfd limits to optimize the value of the experiment while avoiding the potential for harmful interference.

WCAI understands the Commission's concerns regarding the potential for delay if there is an advance consent requirement. WCAI believes any such delay would occur in a very small minority of cases. However, to the extent the Commission believes this is a significant problem, WCAI suggests that the Commission impose a shot clock on existing licensees to either (1) consent to the experiment or (2) raise interference concerns and begin a collaborative process to resolve any such complaint. The Commission has employed a similar shot clock process for tribal participation in certain undertakings pursuant to the Nationwide Programmatic Agreement.[4] A similar approach to PERL applications would provide an appropriate

[4] See Clarification of Procedures for Participation of Federally Recognized Indian Tribes and Native Hawaiian Organizations Under the Nationwide Programmatic Agreement, Declaratory Ruling, FCC 05-176 (rel. Oct. 6, 2005).

balance between the need to avoid harmful interference and the need for streamlined processing of PERL applications.

C. The Commission need not require that an applicant for a program experimental radio license obtain advance licensee consent when the experiment will be conducted indoors at relatively low power.

As noted above, WCAI believes the Commission should generally require licensee consent before a PERL experiment is authorized. However, it would be reasonable to grant PERL authorizations without advance licensee consent when the experiment would be conducted indoors at relatively low power levels and at a relatively low elevation. As the Commission recognizes in the NPRM, experimental authorization is not required at all when it is conducted in an anechoic chamber or Faraday cage.[5] Although they would not block radio signals, other indoor environments would tend to attenuate radio signals and are less likely to result in harmful interference than outdoors tests.[6] Because the attenuation in indoor environments would not be complete and would vary among structures, however, the risk of harmful interference would remain, especially for tests conducted at relatively high power levels and high elevations. Accordingly, the Commission need not require licensee consent before authorizing PERL experiments that would be conducted indoors at relatively low power levels and elevations.

[5] NPRM at ¶ 82.

[6] See NPRM at ¶ 22 (asking whether the Commission should make distinctions between indoor and outdoor use).

D. Existing licensees should not bear the burden of proving that a proposed program experimental radio license experiment would cause harmful interference.

The Commission has proposed that existing licensees bear the burden of proving that a proposed PERL experiment would cause harmful interference. This puts the cart before the horse. The burden of proof typically lies with the person who is initiating the proceeding,[7] and it is the PERL applicant that would be proposing an experiment with the potential to cause harmful interference to licensees already serving end users. There are good reasons why the burden should not be shifted to existing licensees. First, as noted above, existing licensees have incentives to promote radio experiments. But, because a PERL applicant has no end users, a PERL applicant has little incentive to avoid harmful interference to existing licensees. Whatever incentive a PERL applicant might have would be further reduced if the PERL applicant does not need to make any demonstration that its experiment is actually harmless. Second, a PERL applicant is in the best position to make a showing regarding its proposed experiment. An applicant would be the most familiar with the details of its proposal and would likely have already considered or created the types of models that would the most useful in analyzing interference issues. Accordingly, WCAI requests that the burden of proving that a proposed program experimental radio license experiment would cause harmful interference lay with the PERL applicant.

[7] "The burdens of pleading and proof with regard to most facts have been and should be assigned to the plaintiff who generally seeks to change the present state of affairs and who therefore naturally should be expected to bear the risk of failure of proof or persuasion." J. Strong, McCormick on Evidence § 337, 412 (5th ed. 1999)

E. The Commission should adopt special provisions to protect mobile bands commonly used on the campuses of higher education.

As the Commission recognized in the NPRM, the proposed PERL process would be especially problematic in mobile bands, which are heavily used on campuses and provide critical services like E911.[8] Even if the Commission does not adopt for all bands the adjustments WCAI proposes above, it should adopt them for mobile and public safety bands, e.g., the Cellular Radiotelephone Service, broadband PCS, AWS, 700 MHz, BRS/EBS, and 800 MHz. Mobile bands are among the most heavily used spectrum bands: At the end of 2008, there were over 277 million mobile wireless subscribers in the United States.[9] "While penetration rates are high at nearly every age group, they are highest among 18- to 24-year-olds, where penetration has reached 96 percent."[10] Approximately 29.5 million college students fell within this category at the end of 2007,[11] which indicates that there are over 28 million students using mobile devices on college campuses today. Given the extensive use of these bands on the grounds of the very institutions that would be eligible for PERL licenses, harmful interference caused by PERL experiments in mobile bands could result in widespread disruption to critical consumer services. Accordingly, the Commission should at a bare minimum adopt the protections discussed above for the Cellular Radiotelephone Service, broadband PCS, AWS, 700 MHz, BRS/EBS, and 800 MHz bands.

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[8] NPRM at ¶ 31.

[9] 14th Mobile Wireless Competition Report, FCC 10-81 at p. 8 (rel. May 20, 2010).

[10] *Id*. at ¶ 165.

[11] See http://nces.ed.gov/fastfacts/display.asp?id=98.

III. CONCLUSION

The Commission's efforts to streamline the experimental licensing process are a step in the right direction. As discussed above, however, the Commission should alter is proposals to provide a better balance between the need for flexible experimental licensing and the priority of avoiding harmful interference.

Respectfully submitted,

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